



# County of Los Angeles CHIEF EXECUTIVE OFFICE

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WILLIAM T FUJIOKA  
Chief Executive Officer

March 18, 2008

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, CA 90012

Board of Supervisors  
GLORIA MOLINA  
First District

YVONNE B. BURKE  
Second District

ZEV YAROSLAVSKY  
Third District

DON KNABE  
Fourth District

MICHAEL D. ANTONOVICH  
Fifth District

Dear Supervisors:

**CHIEF INFORMATION OFFICE: AMENDMENT NUMBER 2 TO THE AGREEMENT  
BETWEEN THE COUNTY OF LOS ANGELES AND DEWBERRY & DAVIS  
SERVICES OPERATIONS INC. TO ACQUIRE DIGITAL AERIAL IMAGERY DATA  
QUALITY ASSURANCE/QUALITY CONTROL AND DISTRIBUTION SERVICES  
(ALL DISTRICTS, 3 VOTES)**

**IT IS RECOMMENDED THAT YOUR BOARD:**

Approve and authorize the Chief Information Officer to finalize and execute Amendment No. 2 (Attachment A) to the existing Agreement between the County of Los Angeles and Dewberry & Davis Services Operations, Inc. (Dewberry & Davis) to acquire digital aerial imagery quality assurance/quality control, creation of one foot resolution images, and distribution services of all Los Angeles Regional Imagery Consortium (LAR-IAC) 2 data products to the project participants. This Amendment will extend the contract term for one year effective upon Board approval with two one-year options at the County's discretion and increase the maximum contract sum by \$645,000, from \$484,517 to \$1,129,517.

**PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION**

The purpose of this action is to receive authorization from your Board to execute Amendment No. 2 to an existing Agreement with Dewberry & Davis to acquire quality control and distribution for LAR-IAC 2 data products. Services contracted under this Amendment include:

- Performing quality assurance/quality control for all LAR-IAC 2 digital imagery data products to ensure that they fully meet project specifications;
- Creating one foot resolution images for display in the public domain; and

- Distributing LAR-IAC 2 countywide and spatially limited datasets to consortium participants.

### **Background**

The LAR-IAC is a multi-jurisdictional purchasing arrangement that enables participating governments to benefit from combined economies of scale to efficiently and cost effectively acquire and update high definition aerial imagery. In 2005, the County established LAR-IAC 1, in partnership with ten County departments, 32 cities and six agencies, to share \$5.8 million in acquisition costs to obtain and distribute high-definition aerial imagery. LAR-IAC 1 was completed on-time and within budget and resulted in direct savings exceeding \$5.7 million.

LAR-IAC 2 will update the digital aerial imagery data obtained in 2005-2006 with new data obtained in the winter of 2007-2008. The updated digital aerial imagery data will allow participants to identify and analyze areas of changes, keep emergency responders up to date, ensure permit compliance, provide validation of planning, and support service integration and delivery across the County.

On November 20, 2007, the Board approved \$2.0 million from the Information Technology Fund (ITF) to fund the LAR-IAC 2 project contracts, while contributions from participating jurisdictions are collected. Similar to the LAR-IAC 1 project, it is anticipated that any bridge funding used to support LAR-IAC 2 will be repaid to the ITF.

### **Implementation of Strategic Plan Goals**

LAR-IAC 2 supports several County Strategic Goals:

1. **Service Excellence** – Enables participating jurisdictions to improve delivery of services and information to the public by using the highest quality aerial data and spatially specific information.
2. **Workforce Excellence** – Provides County employees with improved decision making tools to better manage delivery of public services by adding a visual context to constituent issues and needs.
3. **Organizational Effectiveness** - Allows participating departments and agencies to concentrate on their core missions by eliminating redundant contracting activities.
4. **Fiscal Responsibility** – Reduces the acquisition cost for aerial imagery by 50 percent when compared to independent procurement.

### **FISCAL IMPACT/FINANCING**

This proposed Amendment will increase the maximum contract sum of the County Agreement with Dewberry & Davis by \$645,000, from \$484,517 to \$1,129,517. ITF funds, approved by your Board on November 20, 2007, will be used as bridge funding to ensure that the County can meet contract payment obligations in a timely manner. These funds will be returned to the ITF on receipt of committed funds from participating municipalities and other government agencies.

As of February 1, 2008, there are currently ten (10) County departments, twenty-four (24) municipalities, and three (3) other governmental agencies which have signed a Letter of Intent confirming their participation in the project and their intention to make payments equaling approximately \$3.4 million for project funding (see table below). All funds received from participants that exceed project costs will be used to further update the data or will be refunded to participants.

Description	Commitments
County Departments	\$ 1,794,100
Municipalities	1,320,198
Other Agencies	319,500
Total	\$ 3,433,798

No additional net County cost is required.

### **FACTS AND PROVISIONS/LEGAL REQUIREMENTS**

On January 31, 2006, your Board authorized the Chief Information Officer (CIO) to sign an Agreement with Dewberry & Davis with a maximum contract sum not to exceed \$400,000 to provide for the independent quality assurance/quality control and distribution of aerial imagery products for LAR-IAC 1 (formerly known as the Los Angeles Region-Imagery Acquisition Project). This Agreement was executed on March 30, 2006.

On August 15, 2006, your Board approved Amendment Number One to the Agreement with Dewberry & Davis to increase the contract sum by \$84,517, from \$400,000 to \$484,517. This Amendment supported the acquisition of an additional orthogonal imagery product, additional quality control/assurance services, and distribution of imagery products to LAR-IAC 1 participants.

The proposed Amendment has been approved as to form by County Counsel.

**IMPACT ON CURRENT SERVICES (OR PROJECTS)**

Approval of the requested actions will expand the imagery available to County departments and LAR-IAC participants, and complete required quality control activities.

**CONTRACTING PROCESS**

The CIO did not advertise the proposed Amendment No. 2 on Office of Small Business Countywide Web Site as a contracting opportunity because it is for the continued provision of technical quality control/quality assurance services for which the current contractor is uniquely qualified to perform. Only a very limited number of firms in the nation have the expertise, experience and capacity to perform this level of validation and to select a new contractor at this time would be extremely costly to the County and would impact the ability to ensure timely delivery of quality aerial imagery to LAR-IAC participants.

**CONCLUSION**

We recommend approval of attached Amendment with Dewberry & Davis which will allow the LAR-IAC 2 project to move forward and achieve the goal of cost saving and increased benefits to our constituents through meaningful public agency collaboration and partnerships.

Respectfully submitted,



WILLIAM T FUJIOKA  
Chief Executive Officer

WTF:ES:JWF  
GS:JY:cg

Attachment (1)

- c: Chair, Information Systems Commission
- Chief Information Office
- County Counsel
- Director, Department of Public Works
- Director, Regional Planning Department

**AMENDMENT NUMBER 2**

**TO**

**AGREEMENT BY AND BETWEEN**

**COUNTY OF LOS ANGELES**

**AND**

**DEWBERRY & DAVIS SERVICES OPERATIONS, INC.**

**FOR**

**DIGITAL AERIAL IMAGERY DATA QUALITY ASSURANCE/QUALITY CONTROL  
AND DISTRIBUTION SERVICES**

**AMENDMENT NUMBER 2 TO**  
**AGREEMENT BY AND BETWEEN**  
**COUNTY OF LOS ANGELES AND**  
**DEWBERRY & DAVIS SERVICES OPERATIONS, INC. FOR**  
**DIGITAL AERIAL IMAGERY DATA QUALITY ASSURANCE/QUALITY CONTROL**  
**AND DISTRIBUTION SERVICES**

This Amendment Number 2 ("Amendment No. 2") to the Agreement (as such term is defined below), as amended, is entered into as of \_\_\_\_\_, 2008 by and between the County of Los Angeles in the State of California ("County") and Dewberry & Davis Services Operations, Inc., a Virginia corporation ("Contractor"), with reference to the following facts.

**Recitals**

WHEREAS, County and Contractor entered into that certain Agreement for Independent Quality Assurance/Quality Control and Distribution Services For Digital Ortho Imagery, Digital Terrain Models and Oblique Aerial Digital Imagery ("Agreement") which was approved by County's Board of Supervisors and executed by the County's Chief Information Officer on March 30, 2006;

WHEREAS, the Agreement was amended under that certain Amendment Number 1 ("Amendment No. 1) which was approved by the County's Board of Supervisors on August 15, 2006; and

WHEREAS, the parties now wish to further amend the Agreement to, among other things, extend its term in order to allow for the continuation of the services being performed under the Agreement and provide a corresponding increase in the maximum contract sum under the Agreement.

NOW, THEREFORE, pursuant to Paragraph 6 (Change Notices and Amendments) of the Agreement, County and Contractor hereby agree to further amend the Agreement as follows.

1. Paragraph 3.1 (County Project Director) of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 3.1 (County Project Director) to read as follows:

"3.1 County Project Director.

County Project Director for this Agreement shall be the following person:

Mark Greninger  
Geographic Information Officer  
County of Los Angeles  
500 West Temple Street, Suite 493  
Los Angeles, California 90012  
Telephone: (213) 974-2154  
Fax: (213) 633-4733  
E-mail: mgreninger@cio.lacounty.gov"

2. The final line of Paragraph 3.2.1 of the Agreement which reads "E-mail: nfranchino@planning.co.la.ca.us" is hereby deleted in its entirety and is replaced with "E-mail: nfranchino@planning.lacounty.gov".

3. Paragraph 4.3.4 of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 4.3.4 to read as follows:

"4.3.4 The following persons have been identified by Contractor as the lead members of its Project Team and are hereby approved as of the Effective Date by County in the following roles:

<u>Name</u>	<u>Position</u>
Phillip Thiel	Project Director
David Maune	Project Manager
Brian Mayfield	Deputy Project Manager
David Hill	Project Surveyor
Phil Worrall	GIS Manager (Pinnacle)
Jay Concepcion	Orthophoto QA/QC Team Leader
Tim Blak	DTM QA/QC Team Leader
Jay Brunkow	Contour QA/QC Team Leader
Phil Worrall	Product Generation Team Leader (Pinnacle)"

4. Paragraph 6.1.4 of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 6.1.4 to read as follows:

"6.1.4 Notwithstanding any other provision of this Paragraph 6 (Change Notices and Amendments), to the extent that extensions of time for Contractor performance do not impact either the Statement of Work or cost of this Agreement, County Project Director, in his discretion, may grant Contractor extensions of time in writing for the Work listed in the SOW or otherwise in this Agreement provided such extensions shall not extend the Term of this Agreement beyond that provided for in Paragraph 7.1 (Contract Term)."

5. Paragraph 7 (Term) of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 7 (Term) to read as follows:

**"7. TERM.**

7.1 Contract Term. The term of this Agreement shall commence on the Effective Date and shall continue in full force and effect for one (1) year (hereinafter "Initial Term"), unless sooner terminated or extended, in whole or in part, as provided in this Agreement in Section 6.1 (Change Notices and Amendments). Upon expiration of the Initial Term or any Extended Term (as defined in Paragraph 7.2 (Definition of Term), County may, in its sole discretion, extend this Agreement for additional two (2) consecutive one-year terms (hereinafter "Extended Term(s)") one (1) year at a time by giving a thirty (30) day written notice to Contractor, provided that if this Agreement is not so extended, the remaining option(s) shall automatically lapse.

7.2 Definition of Term. As used throughout this Agreement, the word "term" shall include the Initial Term and any Extended Term(s)."

6. Paragraph 8.2 (Maximum Contract Sum) of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 8.2 (Maximum Contract Sum) to read as follows:

"8.2 Maximum Contract Sum. The "Maximum Contract Sum" under this Agreement shall be the total monetary amount payable by County to Contractor for supplying all the tasks, subtasks, deliverables, goods, services, optional work and other work specified under this Agreement. All work completed by Contractor must be approved in writing by County. If County does not approve work in writing, no payment shall be due to Contractor for that work. Notwithstanding such limitation of funds, Contractor shall satisfactorily perform and complete all work required of Contractor under this Agreement.



The Maximum Contract Sum for this Agreement, including all applicable taxes, authorized by County hereunder, shall not exceed One Million One Hundred Twenty-Nine Thousand Five Hundred Seventeen Dollars (\$1,129,517), which includes Five Hundred Eight-Four Thousand Six Hundred Thirty Six Dollars and Seventeen Cents (\$584,636.17) for the required deliverables and Sixty Thousand Three Hundred Sixty Three Dollars and Eighty-three Cents (\$60,363.83) for optional work, as further specified in Exhibit C (Price and Schedule of Payments), unless modified by a duly authorized Amendment under the provisions of Paragraph 6 (Change Notices and Amendments)."

7. Paragraph 10.2 (Submission of Invoices) of the Agreement is hereby deleted in its entirety and is replaced with the following new Paragraph 10.2 (Submission of Invoices) to read as follows:

"10.2 Submission of Invoices. Contractor shall invoice County upon completion of Tasks, subtasks, Deliverables, goods and services and other Work which are specified in this Agreement, Exhibit B (Statement of Work), Exhibit C (Price and Schedule of Payments), and any Change Orders, as applicable, and which have been approved in writing by County pursuant to Paragraph 5 (Work; Approval and Acceptance). Contractor agrees not to submit any invoice for payment until County has approved in writing the Work for which payment is claimed. All invoices and supporting documents under this Agreement shall be submitted in duplicate to the following address:

Mark Greninger  
Geographic Information Officer  
County of Los Angeles  
500 West Temple Street, Suite 493  
Los Angeles, California 90012"

8. Paragraph 10.7.2(i) of the Agreement is hereby deleted in its entirety and is replaced with the following new Paragraph 10.7.2(i) to read as follows:

(i) Deliverables not properly completed within thirty (30) working days of Contractor's receipt of the data in question from the data provider or the County as the case may be, as specified in Exhibit C (Price and Schedule of Payments), shall entitle County to a credit of five percent (5%) of the actual cost of such Cost Items, as set forth in Exhibit C (Price and Schedule of Payments).

9. Paragraph 12 (Notices) of the Agreement is hereby deleted in its entirety and is replaced with the following new Paragraph 12 (Notices) to read as follows:

**"12. NOTICES.** All notices or demands required or permitted to be given or made under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the parties at the following addresses and delivered: (1) by hand with signed receipt, (2) by first-class registered or certified mail, postage prepaid, (3) by facsimile or electronic mail transmission, or (4) by overnight commercial carrier, with signed receipt. Notices is deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, on the date of facsimile or electronic mail transmission if followed by timely confirmation mailing, or on the date of signature receipt by the receiving party of any overnight commercial carrier delivery. Addresses may be changed by either party giving ten (10) days prior notice in accordance with the procedures set forth above, to the other party.

To County:

Chief Information Office  
County of Los Angeles  
500 West Temple Street, Suite 493  
Los Angeles, CA 90012  
Attention: Mark Greninger, GIO  
Facsimile: (213) 633-4733  
E-mail: mgreninger@cio.lacounty.gov

with a copy to:

County Counsel, Los Angeles County  
500 West Temple Street  
Los Angeles, CA 90012  
Attention: Jose Silva, Esq.  
Facsimile: (213) 617-7182  
E-mail: josilva@counsel.lacounty.gov

To Contractor:

Dewberry & Davis Services Operations, Inc.  
8401 Arlington Boulevard  
Fairfax, Virginia 22031-4666  
Attention: Phil Thiel  
Facsimile: (703) 849-0182  
E-Mail: pthiel@dewberry.com

County Project Director shall have the authority to issue all notices or demands, which are required or permitted by County under this Agreement."

10. Exhibit B (Scope of Work) of the Agreement are hereby deleted in their entirety and are replaced with a new Exhibit B (Statement of Work), a true and correct copy of which is attached hereto and incorporated herein by this reference.

10. Exhibit C (Price and Schedule of Payments) of the Agreement is hereby deleted in its entirety and is replaced with a new Exhibit C (Price and Schedule of Payments), a true and correct copy of which is attached hereto and incorporated herein by this reference.

11. In all other respects, the Agreement, as amended under Amendment No. 1 and this Amendment No. 2, shall remain in full force and effect.

SIGNATURES ON FOLLOWING PAGE

IN WITNESS WHEREOF, the undersigned have duly executed this Amendment No. 2 as of the date first written above.

County of Los Angeles

DEWBERRY & DAVIS SERVICES  
OPERATIONS, INC.

By \_\_\_\_\_  
John Fullinwider  
Chief Information Officer  
Project Director

By \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

APPROVED AS TO FORM:

Raymond G. Fortner, Jr.  
County Counsel

By \_\_\_\_\_  
Jose Silva  
Principal Deputy County Counsel

## EXHIBIT B — STATEMENT OF WORK

### 1. Major QA/QC Management Tasks

Contractor shall develop a *Quality Plan* that outlines the project, and delivered during a kick-off meeting for LAR-IAC2.

**Task 1a:** Develop a *Quality Plan* for the Los Angeles Region Imagery Acquisition Consortium2 (LAR-IAC2) Program, including Acceptance Criteria for: digital orthophotos at two image resolutions (4" and 1"); aerial triangulation (AT); digital terrain model (DTM) suitable for orthorectification for "spot updates" only (areas of significant grading).

**Task 1b:** Attend a QA/QC kick-off meeting as well as one additional meeting in Los Angeles or via teleconference to be scheduled by the LAR-IAC Project Manager, and document key activities and decisions.

**Task 1c:** Develop a LAR-IAC QA/QC project tracking spreadsheet that shows the status of all Pictometry International Corp. and/or The Sanborn Map Company, Inc. (Pictometry/Sanborn) product tiles by delivery area: (a) delivered to Contractor, (b) reviewed by Contractor with edit calls provided to Pictometry/Sanborn, (c) corrected by Pictometry/Sanborn and delivered to Pinnacle Mapping Technologies (Subcontractor), and (d) delivered by Subcontractor to LAR-IAC and/or its stakeholders and communities. Incorporate the project tracking spreadsheet into Weekly Progress Reports that report on all significant activities each week.

**Schedule:** The draft *Quality Plan*, incorporating feedback and guidance received during the QA/QC kick-off meeting will be submitted by Contractor to LAR-IAC within two weeks of the QA/QC kick-off meeting, and it will be updated continuously thereafter as new guidance is received from LAR-IAC. Attend meetings in Los Angeles and/or telecons as scheduled by the LAR-IAC Project Manager and document key activities/decisions in a report to the LAR-IAC Project Manager within one week thereafter. Establish the tracking spreadsheet as of the end of the first week in which products are received from Pictometry/Sanborn the image provider to be quality assured by Contractor; update weekly thereafter.

#### **Deliverables:**

**Deliverable 1a:** *Quality Plan for the Los Angeles Region Imagery Acquisition Consortium2 (LAR-IAC2).*

**Deliverable 1b:** *Report that documents key activities and/or decisions made during meetings and telecons.*

**Deliverable 1c:** *Project tracking spreadsheet and weekly progress reports that document key activities for the prior week, including information that shows tiles received from Pictometry/Sanborn, QC'd by Contractor, corrected by Pictometry/Sanborn and submitted to Subcontractor, and delivered by Subcontractor to LAR-IAC.*

### 2. Aerial Triangulation (AT) Reports

**Task 2:** Prepare a report for each Pictometry/Sanborn AT block that documents control used by Pictometry/Sanborn, and results of AT adjustment statistics, compared with the AT Acceptance Criteria D1 through D8 documented in the *Quality Plan*.

**Schedule:** Submit individual AT reports to LAR-IAC within 30 days of receipt of all required AT documentation from Pictometry/Sanborn for each AT block as completed.

**Deliverables:**

**Deliverable 2:** *AT Report for each AT block, signed and sealed by an ASPRS Certified Photogrammetrist.*

**3. QA/QC of 4" Digital Orthophotos in Urban Areas (Project Areas 1 and 3)**

**Task 3a:** Using horizontal photo-identifiable QA/QC checkpoints from LAR-IAC (original project from 2006), measure ground coordinates of these checkpoints on the 4" orthophoto tiles, and prepare Horizontal Accuracy Assessment Reports for each 4" AT block consistent with requirements of the National Standard for Spatial Data Accuracy (NSSDA) and Acceptance Criteria C3 and C4 of the *Quality Plan*. Each Horizontal Accuracy Assessment Report will be signed and sealed by an ASPRS Certified Photogrammetrist.

**Task 3b:** Review all 4" orthophoto tiles [using TIFF-QC software selected by Contractor] and compare aesthetics of each 4" digital orthophoto GeoTIFF image with Acceptance Criteria A1 through A27, C1, C2, C5 and C6 (use Sanborn QC website if applicable). The aesthetic review should identify color and tone imbalance as well as radiometry, artifacts, smears, warping, distortions, seam lines, mosaicking, and processing errors using commonly accepted professional standards. Contractor will submit a TIFF-QC report each week to Pictometry/Sanborn and LAR-IAC, including a Microsoft Word document with project information, point shapefiles that show the location of edit calls made, and an associated Excel file that lists edit calls by major edit call categories, using codes coordinated with Pictometry/Sanborn and LAR-IAC.

**Task 3c:** Perform completeness reviews of all 4" orthophoto tiles for countywide datasets and subsets to be used for each of the spatially-limited dataset (SLDS) areas. Contractor shall ensure proper geographic coverage, check file-naming convention, verify that there are no gaps or overlap, ensure that previously rejected tiles have been corrected by Pictometry/Sanborn and verify that all datasets are complete and include metadata.

**Task 3d:** Generate all 4" orthophoto products required for countywide and spatially-limited datasets on external hard drives using media provided by LAR-IAC.

**Schedule:** For Task 3a, the Horizontal Accuracy Assessment Report for each 4" AT block will be submitted to LAR-IAC within 30 days of receipt of 4" orthophoto tiles covering all such QA/QC checkpoints for each AT block to be evaluated. For Task 3b, TIFF-QC reports for aesthetics will be submitted weekly, but never later than 30 days after receipt of 4"

orthophotos from Pictometry/Sanborn. For Task 3c, document individual 4" orthophoto datasets as complete in Weekly Progress Reports. For Task 3d, document individual 4" orthophoto datasets as generated and ready for delivery in Weekly Progress Reports.

**Deliverables:**

**Deliverable 3a:** *Horizontal Accuracy Assessment Report for each 4" AT block, signed and sealed by an ASPRS Certified Photogrammetrist.*

**Deliverable 3b:** *Weekly TIFF-QC report as described above.*

**Deliverable 3c and 3d:** *Paragraphs and graphics in each Weekly Progress Report that report on the status of tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

**4. QA/QC of 1' Digital Orthophotos in National Forest Areas (Project Area 2)**

The 1' orthophoto tiles in national forest areas will not be reviewed by Contractor for horizontal accuracy.

**Task 4a:** Review all 1' orthophoto tiles [using TIFF-QC software selected by Contractor] and compare aesthetics of each 1' digital orthophoto GeoTIFF image with Acceptance Criteria A1 through A27, B1, B2, B5 and C6. Submit a TIFF-QC report each week to Pictometry/Sanborn and LAR-IAC, including a Microsoft Word document with project information, point shapefiles that show the location of edit calls made, and an associated Excel file that lists edit calls by major edit call categories, using codes coordinated with Pictometry/Sanborn and LAR-IAC.

**Task 4b:** Perform completeness reviews of all 1' orthophoto tiles in national forest areas for countywide datasets and subsets to be used for each of the spatially-limited areas. Ensure that there are no gaps or overlaps and that all datasets are complete and include metadata.

**Task 4c:** Generate all 1' orthophoto products in national forest areas required for countywide and spatially-limited datasets external hard drives using media provided by LAR-IAC.

**Schedule:** For Task 4a, TIFF-QC reports for aesthetics will be submitted weekly, but never later than 30 days after receipt of 1' orthophotos from Pictometry/Sanborn. For Task 4b, document individual 1' orthophoto datasets as complete in Weekly Progress Reports. For Task 4c, document individual 1' orthophoto datasets as generated and ready for delivery in Weekly Progress Reports.

**Deliverables:**

**Deliverable 4a:** *Weekly TIFF-QC report as described above.*

**Deliverable 4b and 4c:** *Paragraphs and graphics in each Weekly Progress Report that report on the status of tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

**5. QA/QC of Photogrammetric Breaklines and LiDAR DTMs in Urban Areas (Project Areas 1 and 3)**

Participants will identify areas of major development for "spot updates". The County will provide DTM of the first LAR-IAC delivery for these areas.

**Task 5a:** Perform completeness reviews of all updated urban area DTM tiles. Ensure that there are no gaps and that all datasets are complete and include metadata.

**Task 5b:** Generate all updated DTM products required for countywide and spatially-limited datasets on external hard drives using media funded by LAR-IAC (from Task 7).

**Schedule:** For Task 5a, document individual DTM tiles as complete in Weekly Progress Reports. For Task 5b, document individual DTM datasets as generated and ready for delivery in Weekly Progress Reports.

**Deliverables:**

**Deliverables 5a and 5b:** *Paragraphs and graphics in each Weekly Progress Report that reports the status of updated DTM tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

**6. QA/QC of Oblique Aerial Digital Images (OADI) from Pictometry**

The Contractor shall only be responsible for completeness and horizontal and vertical accuracy reporting. No aesthetic QC is to be done for the Oblique Imagery.

**Task 6a:** Evaluate OADI for complete coverage.

**Task 6b:** Evaluate horizontal accuracy of OADI imagery.

**Task 6c:** Evaluate vertical accuracy of OADI imagery.

**Task 6d:** Generate OADI deliverables.

**Schedule:** For Task 6a, 6b, and 6c, document tasks as complete in Weekly Progress Reports. For Task 6d, document OADI datasets as generated and ready for delivery in Weekly Progress Reports.

**Deliverables:**

**Deliverables 6a, 6b and 6c:** *Paragraphs and graphics in each Weekly Progress Report that reports the status of tasks completed.*

**Deliverables 6d:** *Paragraphs and graphics in each Weekly Progress Report that documents OADI datasets that have been generated and ready for delivery.*



## **7. Full Delivery of Countywide and Spatially-Limited Datasets (SLDS)**

The Contractor shall be responsible for the physical delivery of QA/QC accepted products from Pictometry/Sanborn (digital orthophotos, DTMs, and contours) to the County as well as to LAR-IAC2 participants.

**Task 7a:** Full delivery to County & SLDS participants. Deliver countywide datasets of all products from Pictometry/Sanborn on two (2) 2-TB drives provided by LAR-IAC, and deliver an estimated 40 spatially-limited datasets (SLDS) on external hard drives (drives should be 300GB, 500GB, and 1TB external firewire and USB 2.0 compatible drives) provided by LAR-IAC, based on shapefiles provided by LAR-IAC to define each spatially-limited area to include buffers. "Full delivery" is all data products for the entire County (the entire "dataset" for the project). All other entities will receive data based on a 1 or 2 mile buffer (that is based on their jurisdiction) and appropriate grid system. These are called "spatially limited dataset participants". A shapefile for the delivery area for each LAR-IAC2 Participant will be provided. The average size of the imagery product deliverables for an individual city will be approximately 20 GB (but this does vary widely).

**Task 7b:** Store all LAR-IAC2 data for one year. The Contractor shall be responsible for storing the LAR-IAC2 product deliverables for a period of at least one year after all product deliverables for LAR-IAC2's initial delivery.

**Task 7c:** Provide up to 5 more spatially-limited participants with products on demand (as new participants are added this is the mechanism to provide them the data for their jurisdiction).

**Schedule:** All deliverables will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

### **Deliverables:**

**Deliverable 7a:** *Full delivery of two (2) sets of the complete countywide datasets of all products on external hard drives using media provided by LAR-IAC.*

**Deliverable 7b:** *One year storage of all LAR-IAC2 data.*

**Deliverable 7c and d:** *Full delivery of all SLDS datasets, including up to 5 more SLDS participants to be delivered on demand on external hard drives using media provided by LAR-IAC.*

## **8. Additional Data Products**

**Task 8a:** Create a complete, seamless, countywide dataset with 1' pixels, resampled from 4" pixels.

**Task 8b:** Create a JPEG2000 dataset of all tiles (1' and 4" resolution).

**Task 8c:** Provide one seamless, SDE Export format file for all 4" orthophotos and one seamless, countywide SDE export format file for all 1' image tiles.

**Task 8d:** Create 40 seamless SDE export format files or file geodatabases (FGDB) for SLDS (based on shapefiles provided by LAR-IAC).

**Schedule:** All deliverables for additional data products will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

**Deliverables:**

**Deliverable 8a:** *Provide resampled set of imagery tiles from 4" pixels to 1' pixels (keep in GeoTIFF format).*

**Deliverable 8b:** *Provide JPEG2000 set of imagery tiles (1' and 4" resolutions).*

**Deliverable 8c:** *Provide SDE export format for imagery.*

**Deliverable 8d:** *Provide 40 SDE or FGDB datasets for SLDS participants on external hard drives provided by LAR-IAC.*

**9. Mosaic Generation**

Generate MrSID and ECW mosaics for color products.

**Task 9a:** Generate 56 countywide MrSID mosaics.

**Task 9b:** Generate 40 MrSID mosaics for SLDS participants.

**Task 9c:** Generate 56 countywide ECW mosaics.

**Task 9d:** Generate 40 ECW mosaics for SLDS participants.

**Schedule:** All deliverables will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

**Deliverables:**

**Deliverable 9a:** *Generate and deliver 56 countywide MrSID mosaics (The dataset deliverables will consist of external hard drives) provided by LAR-IAC.*

**Deliverable 9b:** *Generate and deliver 40 MrSID mosaics for SLDS (external hard drives).*

**Deliverable 9c:** *Generate and deliver 56 countywide ECW mosaics (external hard drives).*

**Deliverable 9d:** *Generate and deliver 40 ECW mosaics for SLDS (external hard drives).*

**10. Production Management**

The Contractor's Project Manager will assume some project management duties for project related issues arising during the delivery and QA/QC process. This mechanism could serve as a way to ensure cooperation between all vendors (Pictometry/Sanborn, Dewberry, Pinnacle and LAR-IAC) and also will help identify potential problems before they are bigger problems that lead to project delays. More precise guidelines and scope of this effort to be detailed in the LAR-IAC2 Quality Plan (deliverable from the Contractor) after all vendors selected for LAR-IAC2.

**Task 10:** Because the aerial triangulation and production of digital orthophotos have not previously been produced to rigorous standards when using Pictometry imagery, Contractor will provide on-call technical support as required by LAR-IAC for management of digital orthophotos produced from Pictometry imagery, development of acceptance criteria, and resolution of technical issues.

**Schedule:** Technical support will be on-call and responsive to LAR-IAC2 requirements.

**Deliverables:** *Deliverables may be in the form of emailed recommendations or could be verbal as the result of teleconferences, subsequently formalized by written documentation.*

## **11. Optional Work**

**Task 11:** As necessary and required by LAR-IAC, a number of optional items can be completed under this task using the mechanisms in Section 6.2 (Change Order) of this Agreement as long as funding remains to complete the optional tasks.

**Schedule:** Each optional item will include a schedule for completion.

**Deliverables:** *Each optional item will include deliverable(s) as defined in the change order.*

**Exhibit C**  
**Price and Schedule of Payments**

The following table represents the Contractor's cost bid for Independent QA/QC Services for Los Angeles County; for the LAR-IAC2 Project.

#	A	B	C	D	E	F
	Major QA/QC Tasks	Total Number of tasks	Unit Cost where applicable	Total Costs if all tasks are performed	QA/QC Tasks and Subtasks	Deliverable #
1	Major QA/QC Management Tasks	1	\$36,814.18	\$36,814.18	Quality Plan + PM	1a
		4	\$3466.80	\$13,867.20	Meetings in LA	1b
		1	\$3,316.57	\$3,316.57	Progress Tracking	1c
2	AT Reports	26	\$1,316.91	\$34,239.63	AT Reports	2
3	4" Digital Orthophotos in Urban Areas – each tile is ¼ mi <sup>2</sup>	24 AT blocks	\$1,304.68	\$31,312.40	Horizontal Accuracy	3a
		12,721 tiles	\$15.59	\$198,320.39	Aesthetics	3b
		All AT blocks	N/A	\$39,590.17	Completeness	3c
			N/A	\$30,622.94	Generate products	3d
4	1' Digital Orthophotos in National Forest Areas – each tile is 1 mi <sup>2</sup>	1,080 tiles	\$15.59	\$16,837.20	Aesthetics	4a
		2 AT blocks	\$4,853.52	\$4,853.52	Completeness	4b
			\$5,731.66	\$5,731.66	Generate products	4c
5	Updated Photogrammetric breaklines and DTMs in Urban Areas – each tile is ¼ mi <sup>2</sup>	200 tiles	N/A	\$150.00	Completeness	5a
			N/A	\$300.00	Generate products	5b
6	Oblique Aerial Digital Images (OADI) from Pictometry	All	N/A	\$3,567.24	Image Cover	6a
		Point	N/A	\$9,888.48	Horizontal Accuracy	6b
		Point	N/A	\$9,888.48	Vertical Accuracy	6c
		All	N/A	\$27,351.00	Deliverables	6d
7	Full Delivery of 2 countywide datasets plus 40 spatially-limited datasets for cities and jurisdictions	All	\$4,252.61	\$4,252.61	Full Delivery	7a
		1	\$10,350.00	\$10,350.00	One Year Storage	7b
		1	\$8,750.00	\$8,750.00	5 new participants	7c
8	Additional Data Products	1	\$7,560.00	\$7,560.00	4" to 1' resample	8a
		1	\$7,500.00	\$7,500.00	Create JPEG2000	8b
		1	\$15,000.00	\$15,000.00	SDE Export format	8c
		40	\$100.81	\$4,032.50	SDE or FGDB for SLDS	8d
9	Mosaic Generation	56	\$100.81	\$5,645.50	MrSID countywide	9a
		40	\$100.81	\$4,032.50	MrSID SLDS	9b
		56	\$100.81	\$5,645.50	ECW countywide	9c
		40	\$100.81	\$4,032.50	ECW SLDS	9d
10	Production Management		N/A	\$41,184.00	Manage Project	10
11	Optional Items	N/A	N/A	\$60,363.83	Optional Items	11
	<b>TOTAL COSTS</b>			<b>\$645,000.00</b>		